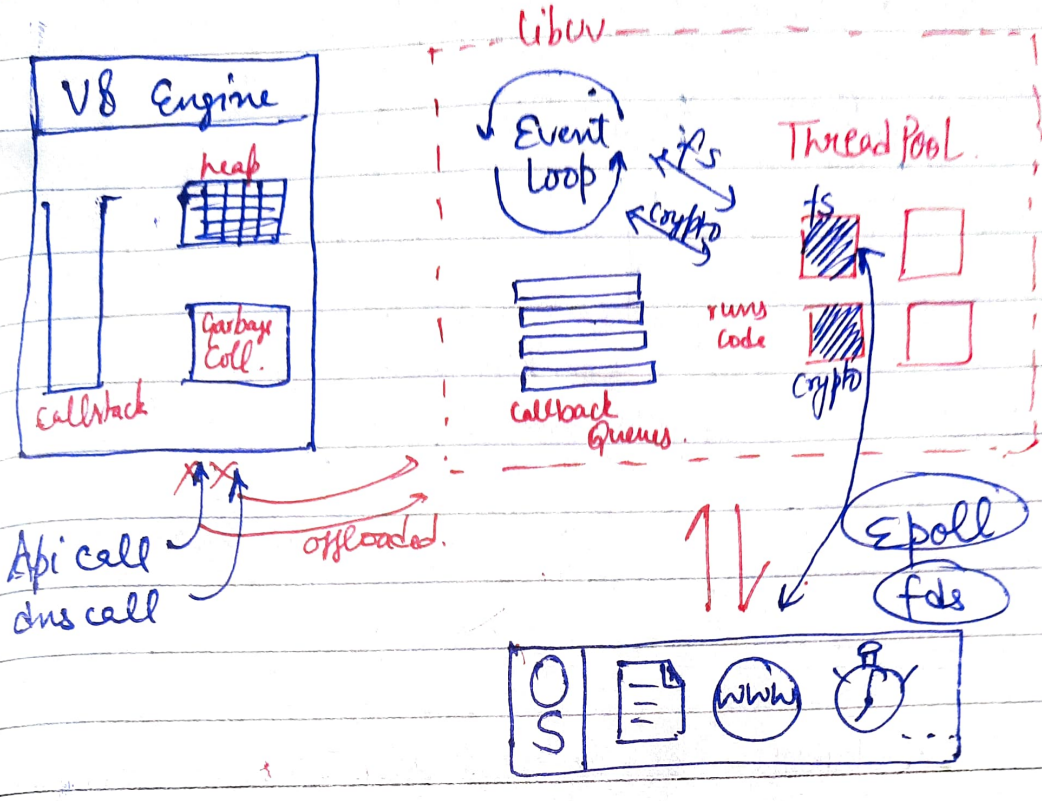
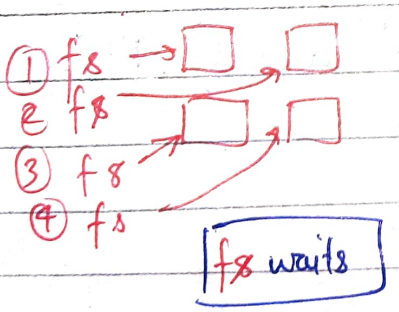
EP-10 THREAD POOL



* By default, the size of UV_THREADPOOL_SIZE = 4;

* if we do 5 fs calls simultaneously.



WHEN THREADPOOL IS USED ?

- fs
- dns.lookup
- crypto
- user_specified_code (C++ code)

Ques: Is NODE JS single threaded / multithreaded

Ans: 1 → When? It depends.

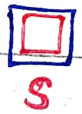
Sync JS
Javascript is a sync. single threaded language.

Asyn. JS.
if heavy operations of node js like -fs, -dns are used then UV_threadpool is used.
making js a multithreaded lang.

We can change the default size of UV_threadpool by process.UV_THREADPOOL_SIZE = 4;

How libuv interact with OS?
How does it handles the thousands of API calls?

→ * Networking happens in sockets
* for each call we have a socket.
↳ each socket has its file descriptor.

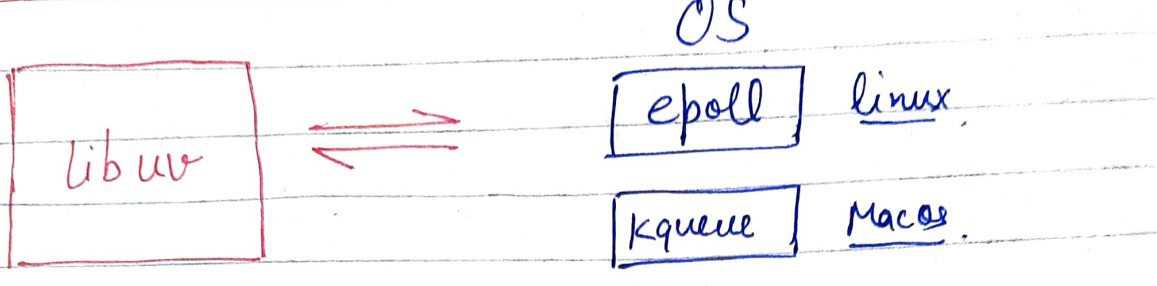


In this case what if 1000 users came, so we can't make 1000 threads.

Thread per connection

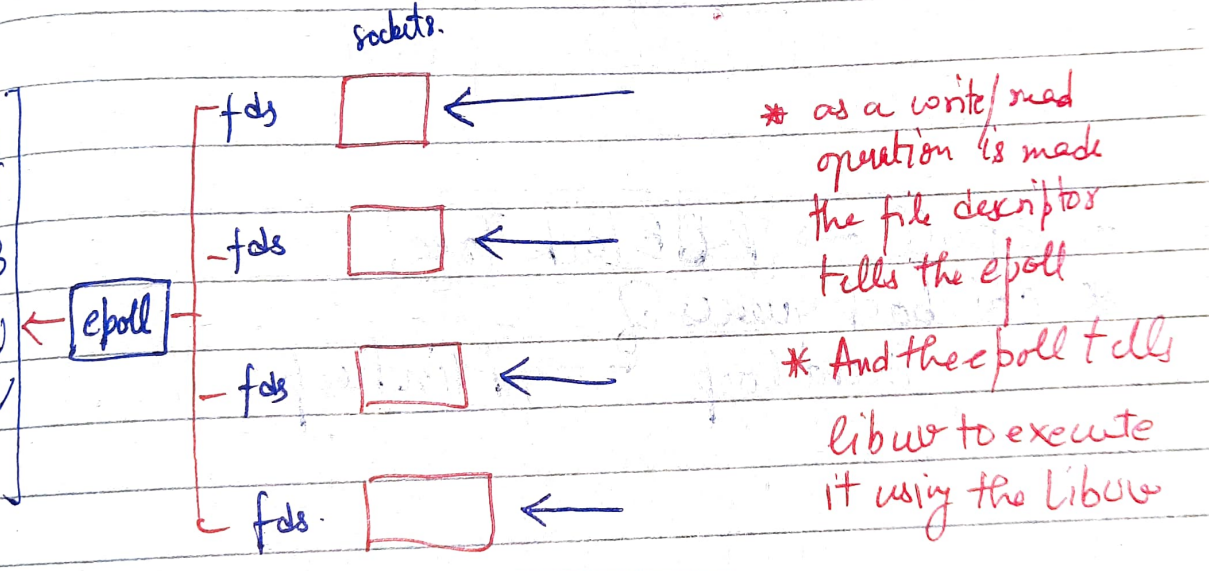
↳ for these type of Blocking operation we need a thread.

for these scenarios we have systems inside our OS.



[scalable · I/O event notifications mech]

Thread per connection is not a good idea.
So we prefer



* as a write/read operation is made the file descriptor tells the epoll
* And the epoll tells libuv to execute it using the libuv

MECHANISM THAT NOTIFY US WHENEVER AN EVENT

THIS IS WHY NODE IS CALLED EVENT DRIVEN ARCHITEC.